

[(362424)] LIEBHERR L556 065472-1826 - Diesel Engine

Sample No: LH

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Oil Type: PETRO CANADA 10W40

SAMPLE INFORMATION

Sample Number		LH	LH0250777	LH0239119	LH0226823
Sample Date		20 Dec 2023	10 Mar 2023	15 Aug 2022	10 May 2022
Machine Hours		5792	3355	1598	1105
Oil Hours		0	0	0	0
Oil Changed		Not Changd	Not Changd	Changed	Changed
Sample Status		ABNORMAL	NORMAL	NORMAL	NORMAL
	ONDITION				
Visc @ 100°C	cSt	0 11.3	0 12.6	○ 13.6	12.0

Oxidation (PA)	%	57	87	64	93
**					
CONT	AMINATIO	N			
Water	%	NEG	NEG	NEG	NE
Soot %	%	0	0	0	0
Nitration (PA)	0/_	19	93	62	86

Nitration (PA)	%	48	83	62	86
Sulfation (PA)	%	50	67	53	67
Glycol	%	NEG	NEG	NEG	0.0
Fuel	%	01	<1.0	<1.0	<1.0
Silicon	ppm	06	8	6	8
Sodium	ppm	○ <1	02	2	0 4
Potassium	ppm	○ <1	0	○ <1	◯ <1

WEA	IR META	LS			
Iron	ppm	3	0 13	0 4	○ 6
Copper	ppm	0 2	0 22	○ 77	◯ 423
Lead	ppm	○ <1	0 1	2	0 13
Tin	ppm	0 ()	0 1	◯ <1	○ <1
Aluminum	ppm	01	2	0 1	01
Chromium	ppm	0 ()	○ <1	0	○ <1
Molybdenum	ppm	0 59	0 60	58	○ 59
Nickel	ppm	0 ()	○ <1	0	0
Titanium	ppm	0	<1	<1	0
Silver	ppm	0 ()	0 0	0	0
Manganese	ppm	0 (◯ <1	◯ <1	◯ <1
Vanadium	ppm	0	0	0	0

	ITIVES				
Calcium	ppm	0 1030	0 1196	0 1078	867
Magnesium	ppm	974	992	1006	0 1172
Zinc	ppm	0 1173	0 1238	1226	1235
Phosphorus	ppm	0 1038	0 1045	0 1052	0 1076
Barium	ppm	0	○ <1	○ <1	2
Boron	ppm	0 2	01	3	37

Depot: LIBPRI Unique No: 5697690 Signed: Kevin Marson **Report Date:** 22 Dec 2023



BOIS LIB INC.

275 RUE JEREMIE-PACAUD PRINCEVILLE, QC CA G6L 0A1 Contact: Service Manager

T: F:

NEG

Diagnosis

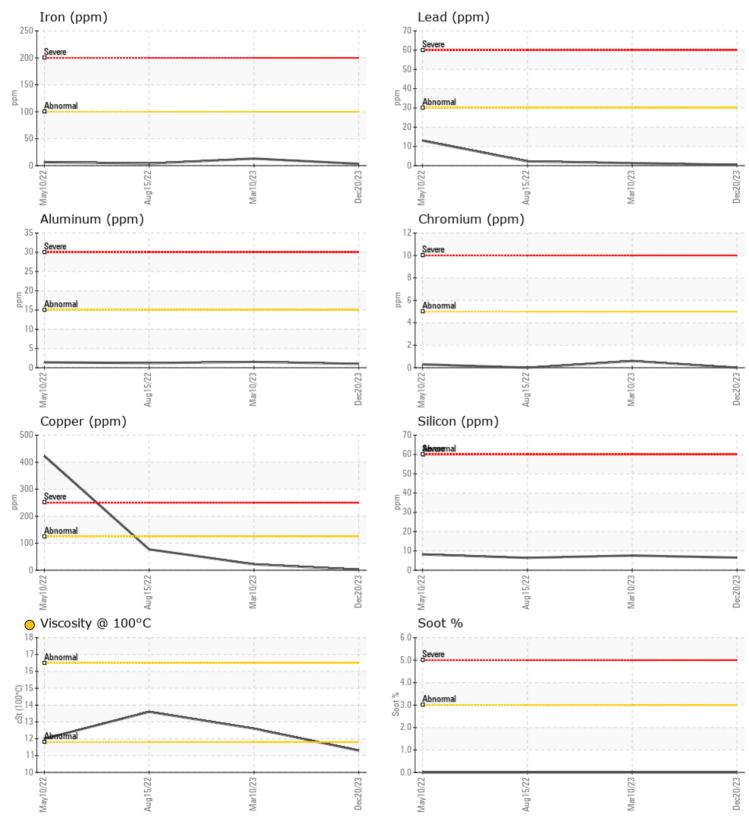
The oil is near the end of it's useful service life, recommend schedule an oil change. No corrective action is recommended at this time. Resample at the next service interval to monitor.All component wear rates are normal. Light fuel dilution occurring. No other contaminants were detected in the oil. Manganese ppm levels are abnormally low. Visc @ 100°C is abnormally low. Viscosity of sample indicates oil is within SAE 30 range, advise investigate.





GRAPHS

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Report Id: LIBPRI [WCAMIS] 02604605 (Generated: 12/28/2023 08:18:37) Rev: 1